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L4: Entry 193 of 193

File: USPT

Jun 12, 1984

DOCUMENT-IDENTIFIER: US 4454414 A

TITLE: Funds transfer system using optically coupled, portable modules

Brief Summary Text (8):

In Moreno U.S. Pat. No. 4,007,355, for example, cashless transactions are made between credit cards through a special interface apparatus located at the vendor station. The cards themselves contain fund data storage capability, but data input and control are provided by the interface. No exchange of funds may be made arbitrarily; because the cards have no keyboards, there must be an interface apparatus present or the cards are useless.

Brief Summary Text (18):

In accordance with the invention, each member of a cooperative is provided with at least one of a first or second type of electronic portable data processing and storage module. Each module contains funds transfer data representing an account balance and a credit limit established by the authorizing entity of the cooperative. During a transaction, modules carried by the members are mated, and data transferred between the two in accordance with the amount of the transaction.

Detailed Description Text (8):

Considering now the operation of module 20 (FIG. 1) in more detail, each member of a cooperative carries one of the modules which has previously been initialized at the authorizing entity, e.g. bank, to have an account balance. For example, the account balance may represent a withdrawal made at the bank or may represent a line of credit. The module 20 contains microprocessor based circuitry, to be described below, including read only memory (ROM) within which is stored a personal identification number (PIN) known only to the authorized holder of the module 20 and other data. The circuitry also includes random access memory (RAM) adapted to receive data entered to the module 20 through keyboard 24 as well as through optical coupler 32, 34. Display 26, responsive to the circuitry, displays the personal identification number, transaction amount and account balance as well as other data as programmed within the microprocessor, as described below. Of particular importance, the portion of the RAM into which transaction data are stored and retrieved for any particular transaction depends upon the position of a variable position switch 30, set by the user prior to each transaction.

Detailed Description Text (9):

The operation of module 20 in a typical commercial environment shall be described with reference to FIGS. 3-5. In FIG. 3, 56 designates an alignment pad having a sidewall 58 within which is defined a recess 60 configured to receive two of the modules 20 of FIG. 1, designated for convenience in FIG. 3 as 20a and 20b, respectively. The alignment pad 56 is adapted to be retained by a vendor at a point of sale to be presented to the vendee prior to each transaction. To make a transaction, the vendor module 20a and 20b are first mated together so that male element 36 of one module mates with female alignment element 40 of the other module, et cetera. The two modules are lowered into the recess 60, using the thumb recesses 62 to enable the user to maintain the two modules together until they are seated within the pad. With both modules turned on via switch 28 (not shown in FIG. 3), and referring to FIG. 4, the vendee first enters the personal identification number that was issued to him with the module. Following entry of each PIN, the enter key E is depressed. The keyboard entered PIN is compared with the PIN stored in masked ROM within the module 20. If the keyboard entered PIN does not match with the stored PIN, the vendee is invited, by display prompting, to make a second try. After a predetermined number of tries, unless the correct PIN is entered, the transaction is not authorized, and the vendee module may be deprogrammed by a deprogram routine stored in either module.

Detailed Description Text (10):

Assuming that the vendee enters the correct PIN, the vendee is display prompted to keyboard enter the amount of the transaction. Following entry of the correct PIN by the vendee as well as entry of the amount, the vendee presses the transfer key to forward the data to the vendor module; if there is any problem, the clear key C is depressed and new data entered by the vendee.

Detailed Description Text (11):

Following operation of the transfer key T by the vendee, the vendee PIN or other account identification data, as well as the amount of the transaction, is viewed by the vendor. The vendor now enters the present date (only if the date stored in the vendor module is not current) and presses the transfer key T indicating that the transaction is acceptable. The vendee unit stores the date and vendor account number (stored in the vendor module) while the vendor unit stores the date and vendee PIN. The vendee and vendor account balances in the two modules are adjusted to reflect the transaction. Each module stores details of the transaction. Ultimately, the modules are data unloaded at the authorizing institution or other entity to provide a hard copy printout of transaction details. This enables the vendor and vendee to maintain accurate account records as well as to trace erroneous or improper transactions.

Detailed Description Text (12):

As one level of security, the transaction is not authorized unless the vendee keyboard enters the proper PIN, issued to him with his module. As another level of security, compared with off-line systems involving the use of a card carrying a magnetic stripe, it is virtually impossible to gain access to the data stored within the internal circuitry of the modules 20. Furthermore, because the housing 20 carries alignment elements 36, 40 as well as optical couplers 32, 34 that are located at precise positions reproduction of the housing by an unauthorized entity would involve substantial expense.

Detailed Description Text (22):

An additional track may be a standard credit track, wherein a bank inputs standby credit and enables the module to operate as a credit card, except that it uses a personal identification number, is self-verifying and interfaces with electronic funds transfer equipment.

Detailed Description Text (23):

As another possibility, mentioned briefly above, each track of memory can correspond to a separate account maintained by individuals within a subgroup, such as a single family. For example, a parent may provide four separate accounts for his children, provide each child with his own module and periodically supply that child's track with a predetermined credit. The parent can thereby maintain close control upon expenditures made by the child and, if necessary, periodically output the contents of the track to be printed as a hard copy record. Preferably, the parent may be in possession with one of the first type modules 20, with each child being supplied with a second type module 42. The module 42 carried by each child will be internally programmed to respond to a separate track of funds transfer data. Periodically, the contents of the second type module carried by each child is monitored by the parent module by mating the two modules in an alignment pad 56, as shown in FIG. 6. In the example shown, the module 20 is controlled to operate on track 3 by the position of switches 30; the module 42 is internally programmed to operate on track 3. Thus, the parent can periodically monitor the account balance, whereas the account balance is not visible to the child or to other individuals. The parent can, at this time, increment the account of the module 42 or increment the account balances of other modules 42 by simply changing the position of switch 30 to the track corresponding to each individual module.

CLAIMS:

1. In a funds transfer system, a portable device for transferring transaction data among members, wherein each member is authorized to transact with other members within preestablished credit limits, the device comprising:

a housing;

data processing and storage circuitry inside said housing;

a keyboard on the housing for providing transaction data and other data entered via said keyboard by a member to said data processing and storage circuitry;

an optical transceiver means exposed through the housing for providing bidirectional transaction data to said data processing and storage circuitry; and

alignment means for positioning said housing relative to a housing of a second similar portable device such that said optical transceiver means is in alignment with an optical transceiver means of said second portable device.

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L4: Entry 179 of 193

File: USPT

Sep 14, 1999

DOCUMENT-IDENTIFIER: US 5953710 A

TITLE: Children's credit or debit card systemAbstract Text (1):

Methods and credit or debit card systems are disclosed that allow the available credit to be determined by someone other than the card issuer and that allow a limit to be set on the number of expenditures that can be made. The methods and systems can be used to provide a mechanism for supervising credit or debit card usage. Methods and systems are disclosed which include a child's credit card account linked to a parent's credit or debit card account. The parent may change the child's available credit without changing the total combined available credit for the child's and the parent's accounts. In addition, an expenditure counter figure associated with the child's account is disclosed which can be used by the parent to enable the child to make an unlimited number of purchases, a limited number of purchases, or no purchases. The parent may make a single payment for both the child's and the parent's credit card accounts. The methods and systems disclosed may be used outside of the parent/child context whenever supervision is required. They may also be used by a single individual to provide limited credit card usage in less secure environments.

Brief Summary Text (2):

Credit and debit cards are used widely around the world as a form of payment for goods. The widespread popularity and worldwide use of credit and debit cards stem from benefits of this form of payment over alternatives such as cash or checks. For example, when purchases are made with credit or debit cards, it is not necessary to carry sufficient cash to make purchases. Purchases made with credit cards provide a receipt and are itemized on monthly statements. Also, liability due to loss of a credit card is limited.

Brief Summary Text (3):

Credit and debit cards are issued to individuals or entities by banks and others in order to provide their customers these benefits. With respect to credit cards, after completing a satisfactory application and signing an agreement to make payments for all purchases made with the credit card, a customer is issued a card with identifying information. The customer can then provide this card, or simply provide the card's identifying information, to merchants in order to make a purchase. In current credit card systems today, a credit card purchase typically involves three steps. The first step, Authorization, checks that the card has sufficient "available credit" for the expenditure amount to be approved. When an authorization is granted, the card's available credit is reduced by the expenditure amount, but the transaction is not yet complete. A second step, Capture, actually debits the account holder's account, creating an expenditure transaction record. Often a merchant will capture an entire day's worth of credit card transactions in one large batch operation after the end of the business day. If an expenditure is authorized but not captured, the authorization will expire after a certain number of days and the account holder will not see a transaction on their statement. The third step, Settlement, is when the funds are actually transferred to the merchant for the account holder's payment. If an account holder returns merchandise and receives a full refund credit prior to Settlement, then the funds will not be transferred to the merchant. Each of these steps may be performed by a separate bank or other processing entity. Typically, there are three entities involved in processing: a Merchant Bank, where a business has its banking accounts, an Acquiring Bank, which accepts credit card transactions on behalf of the Merchant Bank, and an Issuing Bank, which issues credit cards to customers.

Brief Summary Text (4):

Typical credit card accounts have a single Credit Limit which is controlled by the card issuer. The initial available credit of an account holder's account is set equal to the Credit Limit. The dollar amount of a purchase made by the account holder is subtracted from the available

credit. When a payment is made to the credit card account, the available credit is raised by the amount of the payment. While Credit Limit increases and decreases may be requested by the account holder, changes in the Credit Limit must be authorized by the card issuer. In addition, Credit Limits are sometimes unilaterally increased by the credit card issuer. Credit cards also may permit the account holder to withdraw cash or write drafts. Occasionally, a credit card may have separate credit limits for cash withdrawals and purchases. The normal relation between an account's credit limit and available credit is expressed by the equation: available credit=credit limit--account balance due. Thus, changes in the credit limit of a credit card typically imply changes in the available credit. When a bank increases an account holder's Credit Limit, this results in a corresponding increase in their available credit, as given by the above equation. Although several credit cards may be issued for one credit card account, all transactions made with any of the cards are treated identically.

Brief Summary Text (5):

Some credit card accounts have no customer known Credit Limit. Purchases are allowed without reference to a fixed credit limit or available credit figure. Customer balances and charges are processed using analytical and heuristic techniques to spot fraud, unusual spending patterns, or expenses which may be beyond the ability of the account holder to pay. Unusually expensive purchases typically require additional verification of the identity of the individual using the card. When total outstanding expenditures are computed to be beyond the estimated ability of the account holder to pay, an additional purchase may be refused by the bank. Therefore these cards also have a credit limit, although the limit is not explicitly known by the customer.

Brief Summary Text (6):

Typical debit cards function essentially as electronic checks drawn against the account holder's bank checking account. For a debit card, the "available credit" is equal to the available balance in the account holder's bank account. Increases in the available credit require an actual deposit of funds, into the associated bank account, which must be approved by the bank. For example, checks deposited to an account are often subject to a hold policy of several days until the deposited funds are authorized as "available" by the bank. The account used by a debit card may support other capabilities of a regular bank account, including Automated Teller Machine access.

Brief Summary Text (7):

A recent American Bankers Association report indicates that 3.53 percent of bank credit card accounts are 30 days or more overdue. Another report by the RAM Research Group shows credit card delinquency rates on a dollar basis to be 4.33 percent. There is a need for a system by which children can learn to use credit and debit cards wisely. In addition, there are situations in which a system is needed to provide a method of supervising card usage. For example, supervised credit or debit cards may protect a mentally infirm elderly person from fraud by allowing supervision of large expenditures. In addition, employers may wish to supervise their employees' use of credit cards for business expenses.

Brief Summary Text (8):

The use of credit and debit cards by children currently is limited due to drawbacks with existing systems including:

Brief Summary Text (9):

Inability of Parents to Control Expenditure Amounts: Parents often prefer to supervise a child's expenditures on a case by case basis, since expenditures may vary widely from the cost of lunch to the cost of a new bicycle. A single credit or debit limit large enough for any expenditure does not allow a parent to supervise the child's smaller purchases. Furthermore, current credit and debit card systems provide for a limit which cannot be changed without bank approval. Therefore, parental control of a child's credit or debit card expenditures is limited with current systems.

Brief Summary Text (10):

Inability of Parents to Control Number of Expenditures: Often a parent desires to provide a child with a method of making a limited number of expenditures. Current credit card systems provide no mechanism for parents to limit the number of expenditures made by a child.

Brief Summary Text (11):

Payment Drawback: Typically a parent may simply wish to pay for a child's expenditure without automatically allowing more expenditures. However, in current credit card systems, paying a

credit card's balance due results in a corresponding increase in the credit card's available credit.

Brief Summary Text (12):

Accordingly, there is a need for credit or debit card methods and systems that address the disadvantages described above and improve on the methods and systems currently in use.

Brief Summary Text (14):

The present invention encompasses a method and a credit or debit card system that allows a limit to be set on the number of expenditures that can be made and allows the available credit to be determined by someone other than the card issuer. The method and system can be used to provide a mechanism for supervising credit or debit card usage.

Brief Summary Text (15):

One type of preferred embodiment of a method and system according to the present invention includes a separate credit card account for a child which is linked with a parent's credit card account. The method and system allow: a parent to make changes in the child's available credit without changing the total combined credit limit and available credit for the child's and parent's credit card accounts and without requiring bank approval; the child's purchases to be included in the parent's statement; the parent to enable the child to make purchases unlimited in number, a limited number of purchases, or no purchases; and the parent to make a single payment for both the child's and the parent's credit card accounts. In a preferred embodiment of the invention, both the child's and parent's accounts are credit card accounts. While the invention is described in the context of a parent and child, this invention can be used whenever supervision would be helpful, such as when an adult son or daughter supervises a mentally infirm elderly parent. The invention may also be used by a single individual to provide a supervised card for use in less secure environments.

Brief Summary Text (17):

In another preferred embodiment of the invention, the child's account is a debit card account and the parent's account is a credit or debit card account.

Brief Summary Text (20):

In another preferred embodiment of the invention, both credit card accounts are assigned to the same person.

Brief Summary Text (22):

The present invention allows a parent to provide supervised credit to a child.

Brief Summary Text (23):

The present invention allows a parent to receive a statement, including a child's expenses.

Brief Summary Text (24):

The present invention allows a parent to use the system to restrict the number of purchases made by the child.

Brief Summary Text (25):

The present invention allows a parent to make a single payment for their account and their children.

Brief Summary Text (26):

The present invention can be used as an educational tool to teach others how to wisely use credit and debit cards.

Brief Summary Text (27):

By providing for processing which maintains a constant total family credit limit, the present invention permits a parent to increase the child's available credit without the bank approvals normally required for an increase.

Brief Summary Text (28):

In the present invention, a parent's payment pays for a child's expenditures, but does not change a child's available credit. The child's available credit is only increased by a parent request.

Brief Summary Text (29):

The present invention is compatible with existing credit and debit card systems. The invention may be implemented by extending the operation of conventional systems, without requiring their replacement.

Brief Summary Text (30):

The present invention does not require changes to the physical computer hardware or merchant equipment in use for credit and debit card systems today.

Drawing Description Text (5):

FIG. 3 shows a flow chart of the approval processing of a purchase made with either the parent's credit card or the child's credit card in an embodiment of the invention.

Drawing Description Text (6):

FIG. 4 shows a flow chart of the approval processing of a purchase made with a credit card with additional steps for expenditure limits processing in an embodiment of the invention.

Drawing Description Text (7):

FIG. 5 shows a flow chart of the processing of a credit to a credit card account in an embodiment of the invention.

Drawing Description Text (8):

FIG. 6 shows a flow chart of the processing of a parent request for an increase in the child's available credit in an embodiment of the invention.

Drawing Description Text (10):

FIG. 8 shows a flow chart of the processing of a parent request for a decrease in a child's available credit in an embodiment of the invention.

Detailed Description Text (2):

A preferred embodiment of the present invention provides a credit card system. More specifically, the present invention encompasses a credit card system that allows a limit to be set on the number of expenditures that can be made and allows the available credit to be determined by someone other than the card issuer. The system can be used to provide a mechanism for supervising credit or debit card usage.

Detailed Description Text (4):

A physical credit card for a parent 2 with an associated parent's account number;

Detailed Description Text (5):

A physical credit card for a child 4 with an associated child's account number;

Detailed Description Text (6):

A Merchant Credit Card Transaction Processing System 6;

Detailed Description Text (9):

A telecommunications link 12(a) which interconnects the Merchant Credit Card Transaction Processing System and the Bank Approval Processing System;

Detailed Description Text (15):

The parent's physical credit card 2 is used by the parent to make purchases by presenting the card to a merchant. Similarly, the child's credit card 4 is used to make purchases by presenting the card to a merchant. The Merchant Credit Card Transaction Processing System 6 is used by the merchant to request approval for a customer's credit card expenditure. The Bank Approval Processing System 8 is used to approve credit card expenditure requests submitted by the Merchant Credit Card Transaction Processing System 6. To supervise a child's card, the parent uses a touch tone telephone or other customer access device 14 to enter requests which are processed by the Bank Customer Account Information System 10. A parent sends a payment 16 via the payment delivery service 18 which is processed by the Bank Payment Processing System 20.

Detailed Description Text (16):

The physical credit cards 2 and 4 for the parent and child are standard credit cards issued today. The embodiment also uses existing Merchant Credit Card Transaction Processing Systems 6.

Existing telecommunications links 12(a) interconnect the Merchant Credit Card Transaction Processing System 6 to the Bank Approval Processing System 8. All bank systems use conventional computer and telecommunications equipment.

Detailed Description Text (18):

Credit Cards

Detailed Description Text (19):

The parent and child each have separate credit cards 2 and 4 with distinct credit card numbers that represent credit card accounts. As in current systems each credit card account is assigned to an account holder. The names on the credit cards 2 and 4 normally are different and the mailing addresses may be different as well. Preferably, the child's credit card 4 expires at the same time as or before the parent's credit card 2, avoiding the possibility of an expired parent's card 2 linked to a valid child's card 4. Similarly, if a parent's credit card 2 is revoked due to a decision by the bank to discontinue credit, the child's credit card 4 should be revoked as well. The information on the cards' magnetic strip is the same as credit cards currently in use, and contains just one account number. Normally a credit card account is specified by an account number. However, it is possible to uniquely identify a credit card account using multiple attributes which may be provided on the credit card's magnetic strip. For example, both account number and name may be used to specify an individual credit card account. This invention includes the case where an individual account may be distinguished by both account number and person's name, or any other set of uniquely identifying attributes, such as a Social Security number.

Detailed Description Text (20):

In this invention, the loss or theft of a child's credit card 4 will not affect the parent's credit card 2. The child's account number is immediately canceled, without canceling the parent's account. The bank may then issue the child a new account number and credit card 4. If the parent's credit card 2 is lost or stolen, it is possible to provide processing which allows the child's card to remain functional. However, a preferred approach is to immediately create a new parent's account number and change the child's card to be associated with the new account.

Detailed Description Text (22):

The issuer of a credit card, usually a bank, maintains a Bank Accounts Database 22 which includes information about each of the credit card accounts maintained at the bank. A data model of the Bank Accounts Database 22 in a preferred embodiment of the present invention is shown in FIG. 2. The actual database records used with this invention may be adapted to fit into current databases maintained at banks. Many alternate data models and database implementations of this invention are possible. The Bank Accounts Database 22 represented in FIGS. 2-11 may be a network of databases maintained on different computers at more than one location. This invention may be used with credit cards issued by merchants, phone companies, and other entities.

Detailed Description Text (23):

Two new database records are defined: a parent account record 24 and a child account record 26. The new records include the account number 30, account holder name 28, account holder mailing address 32, credit limit 34, account holder personal identification number (PIN) 36, account available credit 38, account balance 40, and any additional fields for information concerning the account that the bank wishes to keep. The account number 30, account holder name 28, and account holder mailing address 32 fields hold the account's identifying number and the name and address of the account holder. The Credit Limit Field 34 in the parent account record 24 holds the credit limit figure set by the bank for the parent's credit card account. In a preferred embodiment of the invention, a credit limit is not maintained with the child's account record 26. The PIN Code Field 36 in the parent's account record 24 is used to verify the PIN input by the parent during parent request processing. PIN codes can be encrypted in the database. A child's account optionally may have a PIN Code Field. The Available Credit Field 38 holds a figure representing the amount of credit currently available for use by the account holder. The child's available credit is maintained separately from the parent's available credit. The child's available credit is initially set to zero, but may be changed to a value specified by the parent at the time the child's account is created. In the parent account record, the Account Balance Field 40 holds the amount currently due for payment. An account balance 40 is also maintained within the child's account record.

Detailed Description Text (24):

In addition, the parent account record 24 includes the child's Account Number Field 42 to hold the associated child's credit account number. If there are additional child accounts, the additional account numbers also are included in the parent account record. Similarly the child account record includes a parent's Account Number Field 44 to hold the associated parent's credit account number. The child's account record also includes an Expenditure Counter Field 46 and a Saved Available Credit Field 48. The Expenditure Counter Field 46 contains an integer value indicating one of three modes:

Detailed Description Text (26):

equal to 0 - - - the child's card is disabled, and expenditures will not be approved until enabled by the parent; or

Detailed Description Text (29):

The data model 22 also includes records of credit card transactions, including debits, credits, payments, and other transactions. In FIG. 2a, debit transaction records 50 and 52 are shown. In a preferred embodiment of the invention, the data model and operations for transaction records are not changed from current credit card systems.

Detailed Description Text (30):

When a child makes an expenditure, a new debit transaction record 52 is created in the child's credit account. In a preferred embodiment of the invention, the data model does not require a separate debit transaction record for the expenditure to be included on the parent's credit account record. Database query processing can retrieve a list including both parent and child debit transaction records, avoiding the need to duplicate the child's debit transaction record. The database query uses the parent's account number to retrieve the child's account number from the parent's account record. Query processing can retrieve all transaction records corresponding to either the parent account number or the child account number. Another approach is to obtain the child account numbers by querying for all child account records linked to a given parent account.

Detailed Description Text (31):

FIG. 2a depicts a parent statement list 56 which is used to generate a monthly statement for the parent's credit card. The parent statement list 56 will include both parent and child transactions. This approach may be used for any number of children. In a preferred embodiment of the invention, the query processing described above is used to create a Parent Statement List 56. The child statement list 54 is defined to include only transactions made by the individual child. Similar to the parent statement list 56, a parent balance list includes both parent and child transactions used to compute the parent's account balance due. As in current systems, the parent's account balance due is used to compute interest charges and for customer inquiries.

Detailed Description Text (33):

When a parent or child desires to make a purchase with his or her credit card, the request is submitted by the merchant and processed by the Bank Approval Processing System 8 to determine whether the purchase is approved. Although referred to as a Bank Approval Processing System, the system may be operated by an entity other than a Bank. The Bank Approval Processing System 8 is shown in FIG. 3.

Detailed Description Text (34):

When a customer makes a purchase using his credit card, the merchant uses a transaction processing system to request approval for the charge. Merchant credit card transaction processing systems vary widely in equipment and implementation. The invention is compatible with and does not require modifications to existing merchant systems. In FIG. 3, the Merchant Credit Card Transaction Processing System 6 is represented by a cash register 58 and a merchant interface unit 60. Other merchant systems may combine the two functions into one unit. Any type of merchant credit card transaction system currently in use may be used with the present invention. The cash register 58 provides the merchant interface unit 60 with the expenditure amount requested for approval. The customer's credit card 2 or 4 provides the credit card account number to the merchant interface unit 60. Typically the customer's account number is input by passing the card's magnetic strip through a reader built into the merchant interface unit 60.

Detailed Description Text (35):

The merchant interface unit 60 establishes a data connection to the bank telecommunications

interface 62 through a telecommunications link 12(a). The merchant interface unit 60 transmits an approval request including credit card account number and expenditure amount. The bank telecommunications interface 62 receives the request for approval from the merchant interface unit 60 and returns a response indicating if the request is approved. The merchant interface unit 60 may then end the data connection to the bank.

Detailed Description Text (38):

1. An approval request from the merchant interface unit 60 including credit card account number and expenditure amount is received by the Bank Approval Processing System 8;

Detailed Description Text (45):

In approval processing with expenditure limits, if an expenditure is rejected due to lack of available credit, the processing is the same as in FIG. 3. As will be shown in FIG. 6, if a child's Expenditure Counter is equal to 0, the expenditure will always be rejected because the child's available credit will be 0.

Detailed Description Text (46):

If at decision step 68 the available credit is greater than or equal to the expenditure amount, additional processing 76 first checks if the approval request is for a parent's account or a child's account. For a parent's account, branch 78 is followed and there is no further additional processing for expenditure limits and processing proceeds as in FIG. 3. For a child's account, branch 80 is followed and at step 82 the value of the Expenditure Counter is obtained from the field in the child account record, as shown in FIG. 2. If the child's Expenditure Counter is less than 0, then the child's card is enabled with no limit to the number of approved expenditures. Then there is no further additional expenditure limit processing and processing proceeds as in FIG. 3. If the child's Expenditure Counter is greater than 0, at step 84 the Expenditure Counter is decremented by one in the Bank Account's Database 22. At step 86, the value of the Expenditure Counter is obtained. If the Expenditure Counter is now equal to zero, at step 88 the value in the Available Credit Field is stored in the Saved Available Credit Field of the child account record, and the Available Credit Field of the child account record is set to 0. With zero available credit, any subsequent expenditures will not be approved. After step 88 processing proceeds as in FIG. 3.

Detailed Description Text (48):

Credit Processing is shown in FIG. 5. The system is similar to the approval processing shown in FIG. 3. When a merchant desires to give a credit to a parent or child, the request is submitted by the merchant and processed by the Bank Approval Processing System 8. The cash register 58 provides the merchant interface unit 60 with the credit amount. The customer's credit card 2 or 4 provides the credit card account number to the merchant interface unit 60. The telecommunications link 64 establishes a data connection between the merchant interface unit 60 and the bank telecommunications interface 62.

Detailed Description Text (50):

1. A credit request from the merchant interface unit 60 including merchant account number, credit card account number and credit amount is received by the Bank Approval Processing System 8.

Detailed Description Text (56):

Parent requests facilitate the supervision of the child's credit card and include increases in a child's available credit, decreases in a child's available credit, enabling and disabling a child's credit card, and controlling the number of expenditures allowed to be made with the child's card.

Detailed Description Text (57):

The processing for a parent request to increase a child's available credit is shown in FIG. 6. The operations are described for a teleprocessing based Bank Customer Account Information System 10. Teleprocessing based systems are common in the banking industry today, allowing a customer to retrieve account information and make requests using a touch tone telephone. Other systems that allow the customer to input and receive information, automated teller machines and personal computer systems, also may be used in this invention. The basic operations are independent of the form of customer access.

Detailed Description Text (58):

The parent uses a touch-tone telephone 14 to dial the telephone number for the Bank's Customer

Account Information System 10, logs on by entering the parent account number and PIN, enters the request to increase the child's available credit by choosing a number from a menu, and enters the amount of the increase. The Bank Customer Account Information System 10 uses the telecommunications link 12(b) to answer the parent's incoming call, guides the parent through the log on process for that particular bank's Bank Customer Account Information System 10. Then a menu of request choices is played to the customer by the Bank Telecom Interface 62. For example, "To increase a child's available credit, press 1, to decrease a child's available credit, press 2," etc. Processing of a parent request to increase a child's available credit proceeds as follows:

Detailed Description Text (59):

1. As a part of the log on and request 100, the parent provides his or her account number, which is used to retrieve the parent's account record from the Bank Accounts Database 22. The parent account record 24 includes the child's account number, as shown in FIG. 2. Using the child's account number, the child's account record 26 may be retrieved from the Bank Accounts Database 22. If a parent has more than one child with a card, the parent also will be prompted by the Bank Telecom Interface 62 to select the child to which the request applies. The Bank Customer Account Information System 10 prompts the parent to enter the amount of the increase requested in the child's available credit. The Bank Telecom Interface 62 receives the amount entered.

Detailed Description Text (62):

4a. If the parent's available credit is less than the requested increase in the child's available credit, at step 106 the request is not approved and a rejection message is sent to the customer who hears it over the telephone.

Detailed Description Text (63):

4b. If the parent's available credit is greater than or equal to the requested increase in the child's available credit, at step 108 the request is approved and an approval message is sent to the customer who hears it over the telephone.

Detailed Description Text (64):

Also at step 108, the Bank Accounts Database 22 is then updated to record the transaction and to update the available credit amounts. The child's available credit is increased by the requested amount and the parent's available credit is decreased by the same amount.

Detailed Description Text (65):

As shown in FIG. 7, the completed parent request is recorded by creating a new parent request transaction record 110 in the Bank Accounts Database 22. The parent request transaction record includes the parent account number, the child account number, the amount of the increase in the child's available credit, and the date and time of the transaction.

Detailed Description Text (66):

This invention may incorporate additional processing to optionally allow security limits on increases in a child's available credit. A security limit value may be stored in the child account record's Credit Limit Field 34. The processing of a requested increase to the child's available credit would include a step to compare the child increase to the security limit value before or after decision step 104.

Detailed Description Text (67):

If a parent requests a change in the child's available credit when the child's card is disabled, the parent's request is rejected.

Detailed Description Text (69):

A parent may also request a decrease in the child's available credit. The processing for a parent request to decrease a child's available credit is shown in FIG. 8. This processing uses the same log on and request step as step 1 for the parent increase request, but the parent requests a decrease rather than an increase in the child's available credit. Processing of a parent request to decrease a child's available credit proceeds as follows:

Detailed Description Text (72):

4a. If the child's available credit is less than the requested decrease in the child's available credit, at step 116 the request is not approved and a rejection message is sent to the parent who hears it over the telephone.

Detailed Description Text (73):

4b. If the child's available credit is greater than or equal to the requested decrease in the child's available credit, at step 118 the request is approved and an approval message is sent to the parent who hears it over the telephone. Also at step 118 the Bank Accounts Database is then updated to record the transaction and to update the available credit amounts. The child's available credit is decreased by the requested amount and the parent's available credit is increased by the same amount.

Detailed Description Text (75):

The processing for a Parent Disable Request is shown in FIG. 9. The parent follows the procedure described in step 100 above for a Parent Increase Request to gain access to the Bank Customer Account Information System 10. When prompted by the Bank Telecom Interface 62 to select a request, the parent makes a request to disable the child's credit card. A database query 120 is performed to retrieve the child's account record Expenditure Counter Field 46. At decision step 122, if the Expenditure Counter is already equal to zero, the child's account is already disabled. At step 124, a rejection message is sent to the parent over the telecommunications link 12(b) indicating that the child's card is already disabled. If the Expenditure Counter is not equal to zero, at step 126 the parent's request is approved. Also at step 126 the child's Expenditure Counter is then set to zero, the child's available credit value is stored in the Saved Available Credit Field 48 of the child account record 26, the Available Credit Field 38 in the child's account record 26 is then set to zero, and the Bank Accounts Database 22 is updated to record the transaction and to update the new values in the child's account record 26.

Detailed Description Text (77):

The processing for a Parent Enable Request is shown in FIG. 10. The parent follows the procedure described in step 100 above for a Parent Increase Request to gain access to the Bank Customer Account Information System 10. When prompted by the Bank Telecom Interface 62 to select a request, the parent makes a request to enable the child's credit card. A database query 120 is performed to retrieve the child account record Expenditure Counter Field 46. If the Expenditure Counter is not greater than (at decision step 128) or equal to (at decision step 130) zero, the child's account is already enabled. At step 132 the parent's request is rejected with an indication that the account is already enabled. If at decision step 130 the Expenditure Counter is equal to zero, the value from the Saved Available Credit Field of the child account record is copied to the Available Credit Field at step 136. If the Expenditure Counter is greater than or equal to zero, at step 134 the parent's request is approved. Also at step 134 the child's Expenditure Counter is set to minus one and the Bank Accounts Database 22 is updated to record the transaction and to update the new values in the child's account record.

Detailed Description Text (79):

The processing for a Parent Limit Request is shown in FIG. 11. The parent follows the procedure described in step 100 above for a Parent Increase Request to gain access to the Bank Customer Account Information System 10. When prompted by the Bank Telecom Interface 62 to select a request, the parent makes a request to limit the number of expenditures which may be made with the child's card. A database query 120 is performed to retrieve the child account record Expenditure Counter Field 46. At decision step 138 if the Expenditure Counter is equal to zero this indicates the child's account is disabled. In a preferred embodiment of the invention, the child account is re-enabled by the parent limit request, so at step 140 the child's available credit is restored using the value in the Saved Available Credit Field 48. For any current value of the Expenditure Counter (Expenditure Counter=0 or Expenditure Counter.noteq.0) at step 142 the Expenditure Counter is set to a number entered by the parent. The parent limit request transaction is recorded in the database together with the updated child account record and the customer receives an indication that their request has been approved.

Detailed Description Text (81):

Payments are processed in a preferred embodiment of the present invention as in current credit card systems. However, in a preferred embodiment of the invention, the statement printed by the bank and sent to the parent includes both parent and child transactions as in FIG. 2a.

Detailed Description Text (82):

In a preferred embodiment of the present invention, a parent's payment increases the parent's available credit but does not change a child's available credit. The child's available credit

is increased only by a parent request or a child payment, see below.

Detailed Description Text (83):

If a parent does not make a complete payment, interest charges will accrue on the unpaid portion as in current systems. This invention incorporates processing such that interest charges do not accrue against the child's account. Note the child's charges are a part of the parent's balance due and will result in interest charges to the parent's account, if appropriate.

Detailed Description Text (84):

Practice Payments, statements and interest processing provides for a child's statement detailing the child's expenditures. When a child makes a payment to the child's account, this will increase the child's available credit. The invention provides processing such that a child payment will also be credited to the parent's account balance without increasing the parent's available credit. This is done by providing a Parent Account Balance List that includes both parent payments and child payments. This invention provides for optional processing which provides for practice interest charges on a child's practice statement. Practice interest is intended for educational purposes only, not payment.

Detailed Description Text (86):

A debit card functions very much like a credit card. However, a debit account is based primarily upon funds deposited in the debit card account, rather than credit granted by a card issuer to a credit card account. The available credit for a debit card account then corresponds to the available account balance in the debit card account. While the term "available balance" can be used with debit cards, we will continue to use the term "available credit" for debit cards as well as credit cards, to avoid repetition.

Detailed Description Text (87):

When a parent's card is a debit card and the child's card is a credit card, this invention uses the same methods previously described to provide supervised credit to the child. The invention uses the parent debit card's available credit in the same way as previously described for the parent credit card's available credit. As in FIG. 6 when a parent requests an increase in a child's available credit, the parent's "available credit" is checked to see that a sufficient amount is present for the increase request. If yes, the child's available credit is increased by the requested amount, the parent's "available credit" is reduced by the same amount, and a transaction record is created in the Bank Accounts Database. However, the parent's Account Balance is not changed by an increase or decrease request in a child's available credit. Since interest earnings and bank service charges are based on the Account Balance, rather than the "available credit," a parent will earn interest for the entire balance even though the child has received available credit.

Detailed Description Text (88):

Debit card approval processing uses the same operations as shown in FIG. 3, except the expenditure amount is checked against the figure in the account's Available Credit Field. Also the expenditure amount is subtracted from the account's available balance.

Detailed Description Text (89):

When the parent's card is a debit card, parent requests to enable, disable, or set limits on the child card operate the same as described for a parent credit card.

Detailed Description Text (91):

When the child's card is a debit card, the child account record used in a preferred embodiment of the invention is shown in FIG. 2 without the Credit Limit Field 34. The Available Credit Field 38 is in effect an Available Balance Field. When there are no parent disable or limit requests, the child account operates as a normal debit card account. Debit card approval processing uses the same operations as shown in FIGS. 3 and 4. Parent requests to enable, disable, or set limits on the child debit card operate the same as described for a child credit card. A parent's statement includes a child's debit card transactions through the same operations as for a child's credit card.

Detailed Description Text (92):

Transaction Record Lists for Credit Cards

Detailed Description Text (93):

The processing of transaction records is summarized. These lists may be implemented by using database query operations to select a given list of transactions for specified accounts from the Bank Accounts Database. The child account may be determined from the parent's account number as described above.

Detailed Description Text (94):

For a Parent Credit Card:

Detailed Description Text (95):

Parent Statement List--includes parent and child debit expenditures, parent and child credits, parent and child payments, parent requests including increase, decrease, enable, disable, and limit requests, as well as any service charges, interest, or fees for the parent and child. Note the parent statement includes child purchases. Transactions on this list are shown on a parent's account statement.

Detailed Description Text (96):

Parent Account Balance List--includes parent and child debit expenditures, parent and child credits, parent and child payments and any service charges, interest charges, or fees for the parent and child. Transactions on this list are used to compute the parent account balance. The parent account balance is also used to compute interest charges for a credit card. Note a child payment increases the parent's account balance while a child debit decreases the parent's account balance.

Detailed Description Text (97):

Parent Available Credit List--includes parent debits, credits, and payments, parent increase/decrease requests and any service charges or fees for the parent and child. While the parent's available credit is maintained in the parent account record, it may be recomputed or verified using these transactions. Note a child payment does not affect the parent's available credit.

Detailed Description Text (98):

For a Child Credit Card:

Detailed Description Text (99):

Child Statement List--includes child debit expenditures, child credits, child payments, parent requests including increase, decrease, enable, disable, and limit requests. "Practice Interest" charges may also be shown.

Detailed Description Text (100):

Child Account Balance List--includes child debit expenditures, child credits, child payments. In a preferred implementation, any service charges, interest charges, or fees for the child are not included. A child's account balance list may be used to compute a child's account balance due. This balance due may be used by the child to determine the amount of a practice payment. An unpaid balance due may be used to compute practice interest for the child. For simplicity, an embodiment of the invention does not include practice interest in the child's balance due. For a child not using practice payments, the account balance due is largely for informational purposes, since the parent will make the payment. In this case, the account balance due may be shown on the child's statement just for the single statement period, rather than carrying a cumulative balance due forward.

Detailed Description Text (101):

Child Available Credit List--includes child debits, credits, and payments, and parent increase/decrease requests. While the child's available credit is maintained in the child account record, it may be recomputed or verified using these transactions. Note a parent payment does not affect the child's available credit.

Detailed Description Text (103):

For a Parent Debit Card and Child Credit Card:

Detailed Description Text (104):

Parent Statement List--is the same as for a parent credit card, except interest may be earned rather than charged. Also, debit account deposits and withdrawals are shown instead of payments.

Detailed Description Text (105):

Parent Account Balance List--is the same as for a credit card, except interest may be earned rather than charged. Also, parent debit account deposits and withdrawals are shown instead of parent payments. The parent's account balance is used to compute interest earnings for the parent debit account.

Detailed Description Text (106):

Parent Available Balance List--includes parent debits, credits, deposits and withdrawals, parent increase or decrease requests and any service charges or fees for the parent. Note a child payment does not affect the parent available balance.

Detailed Description Text (108):

Allowances are a common way parents help children learn about money and personal finances. Allowances may be provided by a parent regularly requesting an increase in a child's available credit in the amount of the child's allowance. These requests may be automated at the request of the parent. The Bank Customer Account Information System 10 menu may be extended to offer support for automating allowances. This would be done by extending the parent request menu to include an additional choice for allowances. When the parent selected allowances, they would be prompted by the Bank Telecom Interface 62 to enter the allowance amount and the periodic interval of the allowance, such as weekly. A parent would also be provided options to change or terminate an allowance previously entered.

Detailed Description Text (109):Cards without Customer Known Credit LimitsDetailed Description Text (110):

For cards without customer known credit limits, when a parent increase request is made, the requested amount is checked against a bank known available credit value for the card, in the same manner as an expenditure approval request for this card would be checked. In general, processing follows the diagrams in FIG. 3 and FIG. 6. except that the available credit value is hidden from the customer. The available credit value may vary and may even be computed when required.

Detailed Description Text (111):

The invention generally does require a credit limit for the child's card, so a child's card without a customer known credit limit operates as described for a child's credit card.

Detailed Description Text (113):

Cards requiring their balance be paid in full when due are fully supported by this invention. The invention uses the same systems and methods as with credit cards. Note that, as for credit cards, modifications to the Bank Approval Processing System 8 used with Revolving Charge Cards may be required. Also, in this case the Bank Approval Processing System 8 may be operated by the merchant, rather than a banking institution.

Detailed Description Text (115):

For simplicity, we have described the invention for the case when a physical credit card is presented to a merchant. In general, a physical credit card is not required. For example, with mail order or telephone order purchases. Also, purchases may be made by entering credit card information using a personal computer or other remote interface not requiring a physical credit card. This invention is fully compatible with these and other transactions not requiring a physical credit card.

Detailed Description Text (117):

New forms of credit cards, "Smart Cards", and new forms of payment including electronic payments are known in current art today. This invention is fully compatible with all account based credit, debit, and payment systems.

Detailed Description Text (119):

It is possible to implement a self supervised card which allows the account holder to supervise their own credit or debit card, with all the capabilities of this invention. For example, an account holder could disable their own credit card and later re-enable it. The operations of enabling, disabling, and setting limits to a card are directly supported in the case of self supervision as described previously. Parent increase and decrease requests are also supported by extending the child's account record in the data model to add a Parent Available Credit

Field. The Parent Available Credit Field would then be referenced instead of the parent account record Available Credit Field 38 in the parent increase or decrease request processing.

Detailed Description Text (121):

It is possible to extend the approval processing shown in FIG. 4 to provide notification to the parent when an attempt is made to use a disabled credit card. This notification may be useful when a single individual supervises a second "child" credit card for their own use in less secure environments, such as public networks:

Detailed Description Text (123):

In another preferred embodiment of the present invention, more than one child has a credit card account or a debit card account linked with the parent's account. Processing is achieved by repeating the invention's processing for each child's card. If a parent's credit card account is linked with more than one child's credit card account, all child accounts will be listed in the parent's credit card account record 24. During a parent request, the parent is prompted by the Bank Customer Account Information System 10 to select a child account. The Parent Statement List 56 will include expenditure and other transaction information for each child whose account is linked to the parent's account. As described above, the linked child accounts may be retrieved using a query with the parent account's number, rather than by including all the child account numbers in the parent account record 24.

Detailed Description Text (125):

In another preferred embodiment of the present invention, one or more child credit or debit card accounts are linked with multiple parent accounts. In this case, it is convenient to have one parent account designated as a "primary" account whose account number is used in the child account record Parent Account Number field 44. The primary parent account will receive copies of the child's transactions on their statement and pay for the child's expenditures, while all parent account(s) will be able to make parent requests including: increase the child's Available Credit, enable/disable the child's card, and set expenditure limits for the child's card. It is also possible to include child transactions on statements for all parent accounts linked to the child.

Detailed Description Text (127):

An alternate embodiment of this invention may be implemented by defining a family available credit which is separate from the parent account's available credit. The family available credit is stored in the Bank Accounts database separately from the parent's available credit. This alternate embodiment uses the family available credit in place of the parent's available credit for operations granting available credit to the child's account and operates, with this substitution, in the same way as previously described. Thus the parent request for approval figure, parent available credit or family available credit, and then compare the amount of the requested increase with the available credit figure.

Detailed Description Text (128):

The children's card system provides all the buyer benefits of a traditional credit card. With a simple telephone call, a parent can easily provide for large expenditures by a child. Another important benefit is the ability of a parent to provide purchasing power to the child anytime and anywhere, without requiring bank approval. For example, a parent at work can easily arrange for the child to buy lunch with the supervised credit card.

Detailed Description Text (129):

The children's credit card system is used for purchases in exactly the same way as other credit cards. In addition, the credit card may be used as an education tool. Under a parent's supervision, the child can learn to use a credit card wisely. The children's card facilitates learning through "practice credit card statements" and even "practice payments" and "practice interest". Unfortunately today, when young adults receive their first credit card they often have little experience or guidance with using a credit card wisely. The children's card also provides for allowances, a common way parents help children learn about money and personal finances.

Detailed Description Text (130):

The children's credit card system is compatible with existing credit card systems. The physical credit cards, credit card magnetic strips, merchant credit card equipment, and credit card approval telecommunication systems do not require changes in order to implement this invention.

This is particularly important due to the large quantity of merchant equipment in place throughout the world today. An invention requiring changes to merchant equipment would be very difficult and slow to deploy. The invention is also compatible with debit cards and other forms of payment including electronic payments.

Other Reference Publication (12):

"Wells Fargo--Personal Finance--Credit Cards," press release printed from <http://www.wellsfargo.com/per/percon/pconcd/> (Wells Fargo World-Wide-Web Site) on May 12, 1996.

CLAIMS:

1. A computer-implemented method of supervising credit or debit card account usage by selectively altering available credit, comprising the steps of:

a) providing at least one first credit card account remotely disposed from at least one first credit card, wherein the first credit card account is issued by an account issuer to a first account holder and has an associated available credit figure;

b) providing at least one second credit or debit card account, remotely disposed from at least one second credit card, wherein the second credit or debit card account is issued to a second account holder and has an associated available credit figure, the at least one first credit card account and the at least one second credit or debit card account being concurrently usable;

c) receiving a request from a requestor to increase the available credit figure associated with the first account;

d) determining whether the request to change the available credit figure associated with the first account will be approved by comparing the amount of the request with a figure established by the account issuer, wherein the figure established by the account issuer is the available credit figure associated with the second account; and

e) if the amount of the request is less than or equal to the available credit figure associated with the second account, approving the request, wherein approving the request comprises:

e.1) increasing the available credit figure associated with the first account by the amount of the request, and

e.2) decreasing the available credit figure associated with the second account by the amount of the request.

2. A computer-implemented method of allowing supervised credit or debit card usage by selectively altering available credit, comprising the steps of:

a) providing at least one first credit card account, wherein the first credit card account is issued by an account issuer to a first account holder and has an associated available credit figure;

b) providing at least one second credit or debit card account, remotely disposed from the at least one second credit card, wherein the second credit or debit card account is issued to second account holder and has an associated available credit figure, the at least one first credit card account and the at least one second credit or debit card account being concurrently usable;

c) receiving a request from a requestor to change the available credit figure associated with the first account, wherein the request to change the available credit figure is a request to increase the available credit figure associated with the first account;

d) providing a total available credit figure associated with the first and second accounts;

e) determining whether the request to change the available credit figure associated with the first account will be approved by comparing the amount of the request with a figure established by the account issuer, wherein the figure established by the account issuer is the total

available credit figure; and

f) if the amount of the request is less than or equal to the figure established by the account issuer, approving the request, wherein approving the request comprises:

f.1) increasing the available credit figure associated with the first account by the amount of the request, and

f.2) decreasing the available credit figure associated with the second account by the amount of the request.

3. A computer-implemented method of allowing supervised credit or debit card usage by selectively altering available credit, comprising the steps of:

a) providing at least one first credit card account, wherein the first credit card account is issued by an account issuer to a first account holder and has an associated available credit figure;

b) providing at least one second credit or debit card account, remotely disposed from the at least one second credit card, wherein the second credit or debit card account is issued to a second account holder and has an associated available credit figure, the at least one first credit card account and the at least one second credit or debit card account being concurrently usable;

c) receiving a request from a requestor to change the available credit figure associated with the first account, wherein the request to change the available credit figure is a request to decrease the available credit figure associated with the first account;

d) determining whether the request to change the available credit figure associated with the first account will be approved by comparing the amount of the request with a figure established by the account issuer, wherein the figure established by the account issuer is the available credit figure associated with the first account; and

e) if the amount of the request is less than or equal to the available credit figure associated with the first account, approving the request, wherein approving the request comprises:

e.1) decreasing the available credit figure associated with the first account by the amount of the request, and

e.2) increasing the available credit figure associated with the second account by the amount of the request.

9. The method of claim 8, wherein the identifying datum is a second account number and a PIN code.

12. The method of claim 11, wherein the first account holder is a child and the second account holder is a parent.

20. A method of supervising credit or debit card account usage by selectively disabling in account, comprising the steps of:

a) providing at least one first credit card account remotely disposed from at least one first credit card, wherein the first credit card account is issued by an account issuer to a first account holder

b) providing at least one second credit or debit card account, remotely disposed from the at least one second credit card, wherein the second credit or debit card account is issued to a second account holder and has an associated available credit figure, the at least one first credit card account and the at least one second credit or debit card account being concurrently usable;

c) creating an association linking the first account and the second account wherein the second account holder has authority to disable the first account;

d) receiving a request from the second account holder to temporarily disable the first account; and

e) temporarily disabling the first account.

21. A system for maintaining credit or debit card account records, comprising:

a) a computer including at least one processor operatively connected to a storage device, the storage device being configured for storing credit or debit card account records wherein each account record is assigned to an account holder, the storage device remotely disposed from credit or debit card associated with the credit or debit account records;

b) at least one first credit or debit card account record, each first account record assigned to a first account holder;

c) means for a requestor to remotely enable and disable the first account;

d) at least one second credit or debit card account record linked to the first account record, each second account record assigned to a second account holder, the at least one first credit card account and the at least one second credit or debit card account being concurrently usable; and

e) wherein the requestor is the second account holder.

25. A system for maintaining credit or debit card account records, comprising:

a) a computer including at least one processor operatively connected to a storage device, the storage device being configured for storing credit or debit card account records wherein each account record is assigned to an account holder, the storage device remotely disposed from credit or debit cards associated with the credit or debit account records;

b) at least one first credit card account record, each first account record assigned to a first account holder;

c) at least one second credit or debit card account record linked to the first account record, each second account record assigned to a second account holder, the at least one first credit card account and the at least one second credit or debit card account being concurrently usable;

d) means for a requestor to change the value of the available credit figure associated with the first account, wherein the available credit figure remains denominated in a single unit of denomination, and wherein the requestor is the second holder.

28. A computer-based method for processing a request to approve an expenditure using a credit or debit card, wherein the credit card is issued by an account issuer to a first account holder and is associated with a first credit card account, comprising the steps of:

a) receiving a request to approve the expenditure;

b) accessing an available credit figure associated with the first account wherein the available credit figure is determined by an entity other than the account issuer;

c) comparing the available credit figure with the amount of the expenditure wherein the available credit figure is determined by a second account holder, and wherein a second account and the first account are concurrently usable by the second account holder and the first account holder, respectively; and

d) supplying an approval or rejection of the expenditure.

34. A computer-based method for processing a request to approve an expenditure using a credit or debit card, wherein the credit or debit card is issued by an account issuer to a first account holder and is associated with a first credit or debit card account, comprising the steps of:

- a) receiving a request to approve the expenditure;
- b) accessing an expenditure counter associated with the first account which limits the number of expenditures allowed for the account holder wherein the expenditure counter figure is determined by a second account holder, and wherein a second account and the first account are concurrently usable by the second account holder and the first account holder, respectively;
- c) supplying an approval or rejection of the expenditure.

36. A system for receiving requests to approve a credit or debit card expenditure by a first account holder, assessing whether the expenditure will be approved or rejected, and providing an approval or rejection indication, comprising:

- a) a computer including at least one processor configured to access a first credit or debit card account assigned to a first account holder, the computer remotely disposed from the first credit or debit card, the processor further configured to access a second credit or debit card account assigned to a second account holder; and
- b) a communications device configured for communicating a request to approve the expenditure to the computer;

wherein the processor is configured to assess whether the expenditure will be approved or rejected by accessing an available credit figure associated with the first account and determined by an entity other than the account issuer, the processor further configured to approve or reject the expenditure responsive to the assessment, wherein the value of the available credit figure assigned to the first account is determined by the second account holder.

38. A system for receiving requests to approve a credit or debit card expenditure by a first account holder, assessing whether the expenditure will be approved or rejected, and providing an approval or rejection indication, comprising:

- a) at least one first credit or debit card account, each first account assigned to a first account holder;
- b) at least one second credit or debit card account, each second account assigned to a second account holder;
- c) a computer including at least one processor configured to access the first and second accounts, the computer remotely disposed from the credit or debit card of the first account holder, the computer further configured to provide concurrent use of the first and second credit or debit card accounts; and
- d) a communications device configured for communicating a request to approve the expenditure to the computer;

wherein the processor is configured to assess whether the expenditure will be approved or rejected by accessing an expenditure counter associated with the first account, the processor further configured to approve or reject the expenditure responsive to the assessment, and wherein the expenditure counter is determined by the second account holder.

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L4: Entry 186 of 193

File: USPT

Mar 2, 1999

DOCUMENT-IDENTIFIER: US 5878141 A

TITLE: Computerized purchasing system and method for mediating purchase transactions over an interactive network

Brief Summary Text (4):

In a transaction for the purchase of goods and/or services, the purchaser typically has the ability to pay for the items using any one of many different payment methods. For instance, consider the familiar situation where a purchaser in a department store wishes to buy an article of clothing. The purchaser can pay for the clothing article with cash or by check. Alternatively, the purchaser might wish to use a credit card or a debit card. Indeed, it is not uncommon for the purchaser to carry many payment options in the form of cash, a checkbook, a bank debit card, as well as many different kinds of credit cards, including cards issued by the merchants themselves (e.g., a Sears.RTM. charge card or a Nordstroms.RTM. charge card), bank issued credit cards (e.g., a SeaFirst Bank VISA.RTM. credit card or a Bank of America MasterCard.RTM. credit card), an organization-related credit card (e.g., United Airlines Mileage Plus First Card.TM. or an IEEE credit card), and association credit cards (e.g., Discover.RTM. and American Express.RTM.).

Brief Summary Text (6):

During the purchase transaction of the clothing article, the purchaser mentally takes note of the forms of payment accepted by the department store. The purchaser then tenders payment using a suitable payment method. If the purchaser chooses to pay with a personal check, the sales clerk performs an authentication process. The clerk only accepts the check if it is local, if the clerk recognizes the person writing the check, or if the person presents another piece of identification (e.g., a credit card or driver's license) to verify the authenticity of that person who is offering the check.

Brief Summary Text (7):

In the event the purchaser tenders a credit card to pay for the clothing article, the sales clerk performs a check to verify that the purchaser has sufficient funds in the credit card account and has not exceeded the spending limit imposed by the issuing institution. This is typically done by passing the purchaser's credit card through a magnetic-stripe card reader, such as a Verifone.RTM. system, that is located at the point-of-purchase counter to electronically read the purchaser's account information contained in the magnetic stripe on the credit card. The purchaser's account information is validated on-line with the card issuer with respect to the purchaser's account balance and spending limit. Assuming that the verification process returns a normal status, the sales clerk accepts the tendered credit card and consummates the purchase.

Brief Summary Text (8):

The complexity of a purchase transaction increases when moved from the point-of-purchase context, where the purchaser and merchant are face-to-face, to a remote purchase context, where the merchant and purchaser are separated from one another. For example, consider another familiar transaction where a purchaser wants to buy a new lamp from a mail order catalog. The purchaser places an order for the lamp over the telephone or through the mail. The purchaser might use a credit card, enclose a check, or simply wait to be billed at the end of the month. The merchant takes an assumed risk that the ordering consumer is legitimate and that payment will be forthcoming, and based upon that assumption, ships the new lamp to the purchaser.

Brief Summary Text (9):

In these transactions, the merchant accepts a fairly high risk of not being paid (compared to other types of sales transactions) because the purchaser does not present a credit card or sign a credit card receipt. The purchaser can deny that the transaction ever occurred, leaving the

merchant with the burden of proving that a transaction took place. To meet this burden, the merchant typically tries to show that the purchaser signed for receipt of the product.

Brief Summary Text (13):

Another issues concerns how to protect the purchaser's wallet from the merchant. Given a choice, the merchant would most likely choose one particular payment method (such as using the merchant's own charge card) that the purchaser might not wish to use. Moreover, for obvious reasons, it is in the purchaser's interest not to reveal his/her bank account or credit card information to the merchant. An electronic purchasing system should block the merchant from access to the purchaser's payment options and to this confidential account information.

Brief Summary Text (16):

Many of the issues raised above are born out of the difficulty and complexity of converting from a "paper-trail" purchase transaction system--where these concerns are addressed in large part through the use of paper checks, receipts, physical credit cards, debit cards, and penned signature verification--to a "paperless" computerized purchase transaction system. It is an object of this invention to provide a "paperless" electronic purchasing system which solves these above noted problems.

Brief Summary Text (23):

According to another aspect of this invention, the purchaser is permitted to provide self-imposed purchase allowances that are stored in the purchaser database. Different purchase allowances can be imposed on different payment methods. The purchase allowances are useful for parents who wish to prevent their children from making an excessive expenditure. Upon receipt of the purchase request, the processor compares the purchase amount to the purchase allowance and denies the transaction if the allowance is exceeded, independent of the payment methods available.

Brief Summary Text (24):

According to yet another aspect of this invention, the purchasing system examines a purchaser's spending limits for some of the payment methods before consummating a transaction. Such spending limits are imposed and maintained by the institutions that administer the payment method, such as a bank or credit card company. After the purchaser selects a preferred payment method, the processor inquires to the issuing institution as to the purchaser's spending limit for that payment method. The processor then compares the purchase amount to the associated spending limit and denies the transaction if the limit is exceeded.

Detailed Description Text (3):

The purchaser database 16 maintains a list of purchasers and their associated personal financial information. The purchaser database stores a set of personal payment methods (such as checking, credit cards, debit cards, Automated Clearing House (ACH) Transfer, etc.) which are registered by the purchaser with the transaction processing unit. A purchaser can use any one of the registered personal payment methods in his/her corresponding set to purchase the goods and/or services from a merchant.

Detailed Description Text (4):

As part of this registration, the purchaser is permitted to self-impose personal purchase allowances to prevent excessive expenditure. These purchase allowances can be associated with different personal payment methods to selectively control expenditures for specific payment methods. For example, the purchaser may wish to restrict purchases using the credit card below one allowance level, while placing a different allowance level on purchases using the debit card. Alternatively, the purchase allowances might be imposed on a purchaser basis, whereby each purchaser is given an allowance regardless of the chosen form of payment. In the family setting, the purchaser could be defined as an entire family whereby every member must abide by the same purchase allowance. This enables the parents to prevent excessive expenditures that a child might accidentally attempt to make. To extend this concept farther, the system can also be configured to support a different purchase allowance for each family member, where the parents have higher allowances than the children. Individualized purchase allowances requires registration of each family member (or purchaser) so that the system can uniquely identify each person.

Detailed Description Text (5):

Purchaser database 16 also stores account balances for each of the personal payment methods of each purchaser. These account balances are used by the transaction processing unit 12 to verify

that the purchaser has sufficient funds to purchase a desired product. Similarly, transaction processing unit 12 examines an associated spending limit for each personal payment method. Spending limits are imposed and maintained by the institutions that administers the payment method, such as an issuing bank or credit card company, to prevent excessive expenditure. For example, most credit cards are issued by the sponsoring bank or association with an upper spending limit.

Detailed Description Text (6):

Purchasing system 10 also has multiple purchasing terminals 18-23 located remotely from transaction processing unit 12. Purchasing terminals 18-23 are illustrated as many different types of electronic devices, including a point-of-purchase register 18, a personal computer 19, a telephone 20, a stand-alone machine 21 (e.g., an ATM), a television and set-top box unit 22, and a magnetic-stripe credit card reader 23 (e.g., a Verifone.RTM. reader). Each purchasing terminal has an input device which can receive a purchase request from a purchaser to buy goods and/or services from a merchant. The input device can be in the form of a keypad (as in the case of the register 18, telephone 20, stand-alone machine 21, and card reader 23) or a keyboard or mouse (as in the case of computer 19), or a remote control device (as in the case of a remote for the TV and set-top box unit 22). These illustrated purchase terminals are only a representative sample, as many other electronic devices can be used to make purchases in the computerized purchasing system of this invention.

Detailed Description Text (18):

In some cases, the purchasing system might require an initial procedure to authenticate the purchaser (or merchant). For instance, the purchasing system might ask the user to input a personal identification number (PIN) before commencing the purchase transaction to verify the purchaser's authenticity. Another technique is to employ secure access hardware, such as smart card and reader, at the purchasing terminal. The smart card can be programmed with information about the user that is used to gain access to the purchasing system, such as the user's PIN or signature tools (e.g., a signing pair of encryption keys). Once the smart card is inserted into the terminal, the purchasing system performs the cardholder authentication automatically.

Detailed Description Text (39):

At step 234, the purchasing system further evaluates whether the purchase amount exceeds any spending limit associated with the selected payment method by checking with the appropriate sponsoring institution. For this example, suppose the selected payment method is a credit card having a credit limit of \$5,000, and the purchase amount is \$8,000. Here, the purchasing system will learn upon checking with the card's issuing bank that the purchase amount exceeds the credit card spending limit imposed by the issuing bank, and thus the transaction should be denied for that payment method. As above, the subscriber is given an opportunity to select another payment method, if any are available, via steps 232 and 228.

Detailed Description Text (43):

The transaction routing system is coupled to a billing system 86, an acquisition system 88, and an accounting system 90. These are example systems that handle the mechanics of submitting a bill to the subscriber and posting the appropriate transaction in the acquiring account (such as a credit card account) and/or subscriber account.

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TITLE: Apparatus and methods for improved credit cards and credit card transactionsAbstract Text (1):

Customized credit and debit cards for issuance by a person or main cardholder, the cards being limited to use in transactions at selected vendors only. Thus, for example, a parent or corporation can issue a customized card to a person or group, wherein the card is only valid for use at restaurants, airlines, hotels, certain stores, or so forth.

Brief Summary Text (2):

Credit cards are currently a common financial tool. Yet, credit card fraud is a considerable concern for credit card companies. The problem occurs when an unscrupulous individual obtains a copy of a person's credit card information, and then uses that information to fraudulently charge purchases to the person's card until the theft is noticed and further use of the card is blocked. In addition to being a considerable problem for the card companies themselves, this illegal practice causes inconvenience and annoyance for the innocent user whose card has somehow been compromised.

Brief Summary Text (3):

Such fraud is a potential problem in various contexts, but recently has become of significant concern in Internet transactions in particular. Transmission of credit card information over the Internet has long been suspect due to the risk of individuals monitoring traffic over the network and then using that information for their personal gain. While secure networks and connections have been increasingly available over the past several years, many are nonetheless unwilling to transmit any credit card information over the Internet, due to the possibility that valuable credit card information could be intercepted.

Brief Summary Text (4):

In addition, monitoring, control and regulation of expenditures and finances is a frequent concern of companies and individuals. It is always desirable to provide apparatus and methods which improve the apparatus and methods for such monitoring, control and regulation. Accordingly, there are numerous improvements which have been heretofore unknown in the art, which improve the effectiveness, value, and/or the efficiency of credit cards, either in general or certain types of financial transactions.

Brief Summary Text (6):

It is an object of the present invention to provide improved credit cards and methods for credit card transactions.

Brief Summary Text (7):

It is a further object of the present invention to provide for customized use credit cards.

Brief Summary Text (8):

It is a further object of the present invention to provide for user-defined credit cards for use in financial transactions.

Brief Summary Text (9):

It is a further object of the present invention to provide for disposable credit cards.

Brief Summary Text (10):

It is a further object of the present invention to provide for limited use credit cards.

Brief Summary Text (11):

It is a further object of the present invention to provide methods and apparatus for secure transmission of credit card information.

Brief Summary Text (12):

It is a further object of the present invention to provide methods and apparatus for minimizing credit card fraud, and the amounts of loss that could occur should card information be intercepted.

Brief Summary Text (13):

It is also an object of the invention to provide methods and apparatus for transmission of credit card information over the Internet with a minimal risk of possible fraud or loss.

Brief Summary Text (14):

In addition to the prevention and reduction of fraud, it is a further object of the invention to provide improved types of credit cards, and improved methods for credit card transactions.

Brief Summary Text (15):

In accordance with the invention, a variety of new forms of credit cards and credit card methods are disclosed herein. In some of the disclosed embodiments, the cards and methods provide improved credit cards and methods providing for customization, limited use, single use (disposability), or so forth. Additionally or alternatively, in some of the disclosed embodiments, the cards and methods include new forms of credit cards designed to reduce or prevent fraud. In addition to, or as an alternative to the prevention of fraud, in some of the embodiments disclosed herein, new credit cards and associated methods are provided for the improvement of credit card transactions and/or for availability of an expanded array of financial products to consumers.

Drawing Description Text (2):

FIG. 1 is a schematic illustration of the customization of a credit card in accordance with one embodiment of the present invention.

Detailed Description Text (2):

In accordance with the present invention, in one embodiment of the present invention, to address the problem of credit card fraud, a new system of disposable credit card numbers is disclosed herein. These credit cards or credit card numbers are generated for a one time, single transaction basis, after which they are disposed of, or thrown away. The numbers can be used by a user over the Internet or any other communications system, whether open or secure, to effect a single transaction. After a one time use of the credit card number, the number is deactivated by the issuing credit card company such that it is no longer available for use. In this manner, a credit card company need not wait to learn whether a given credit card number has been intercepted, and one or more fraudulent purchases made (with the attendant possible loss of time, money and manpower investigating and resolving such matters) before dealing with the results of the potential theft. Rather, all numbers used over the network, or in a certain context, are assumed insecure, and once used for the first time, are no longer available for use. By doing so, the company, so to speak, "beats the thief to the punch," having already deactivated the number after a single use of the card, even before learning of the fraud.

Detailed Description Text (3):

In other embodiments of the invention, customized or limited use credit cards are provided. These cards are customized, preferably by the user, to suit the user's desires or needs. As a result, they provide methods and apparatus which have been heretofore unknown in the art, but which provide benefits that improve the efficiency, ease and uses of payment for goods and services.

Detailed Description Text (4):

Various embodiments of the inventions are possible consistent with the inventions herein. Although reference is occasionally made to either the disposable credit card embodiment or the customized credit card embodiment herein, the features disclosed in association with one can likewise be applied to the other, as well.

Detailed Description Text (5):

With respect to the credit card's number itself, in one preferred embodiment, for example, the credit card number is indistinguishable from permanent, ordinary credit card numbers. By making the customized credit card number indistinguishable from regular numbers both users and vendors

are encouraged to use the credit card in the same manner as regular credit cards.

Detailed Description Text (6):

Similarly, by making the temporary disposable numbers (or likewise the customized credit card number) indistinguishable in appearance from regular credit card numbers, a potential thief is unable to tell in advance that a particular number is a disposable number, and already not valid. This may in turn enhance the potential of catching the thief by alerting the credit card company the first time someone attempts to illegally use the pilfered number.

Detailed Description Text (7):

With respect to either the disposable or the customized credit card, relevant information (such as the expiration date etc.) can either be printed on the card or verbally transmitted to the user. Likewise, the limited use nature of the card (either in a general sense or the specific limitations), the disposability of the card, the range of dates or validity of the card, etc. may either be printed on the card or transmitted to the user, whether verbally or in writing.

Detailed Description Text (8):

In another embodiment, the customized or the disposable number is the user's regular credit card number with a series of digits or alphanumeric characters either inserted therein, or tacked on at the end. This embodiment allows each customized or disposable card to be easily noted by the user to be a mere extension of his or her regular number.

Detailed Description Text (9):

Many of the embodiments herein could be used in conjunction with a policy by the credit card company (or by the main cardholder or the user) in which purchases from Internet transactions, for example (or purchases over unsecure networks), are only accepted if made in conjunction with a disposable or customized credit card number.

Detailed Description Text (10):

The invention can be practiced according to a wide variety of embodiments. In one embodiment, for example, a user dials into her credit card company before making a transaction, and after providing the ordinary credit card number and verification data, is provided with a disposable or customized number and/or mailed, provided with, or allowed to activate a disposable or customized card for a single or a limited range use.

Detailed Description Text (11):

In one embodiment of the invention, a user can indicate in advance of purchase, on the telephone call with the credit card company, what the single use or the customized credit card number is to be used for. This can be used to provide additional security and/or control the uses of the funds placed on that card.

Detailed Description Text (12):

In another embodiment, a user could be provided, each month or each year, with a set of disposable, one time only, or customized, limited use, numbers and/or cards, which are printed on the credit card statement for use during the next month or year, or which are mailed to the user. With respect to the disposable card, the user is instructed that, after use of the number once, the number may not be used again. With respect to the customized card, the cards can either be preset for certain uses, or the cards can be ready and waiting in the user's office or home for setting to the desired use when the user is ready.

Detailed Description Text (13):

The user could also be provided with a set of paper (or thin plastic) credit cards (preferably with magnetic strips), whether along with the customer's monthly statement, with a credit card encoder, with an encoding device which attaches to the computer and/or the Internet, or otherwise. Each of these credit cards could be used once, or on a limited or customized basis, after which the credit card could be ripped up and discarded. The cards could further have printing or indicia on them to remind the user that they are for one time only or customized use.

Detailed Description Text (14):

In a further variation on this approach, the paper cards and/or the provided numbers must be used in a specific required order, for additional security. These paper credit cards or provided numbers could be unusable until activated by the user, as is the practice with new credit cards that are sent out by mail.

Detailed Description Text (15):

In another embodiment, instead of ripping the credit cards up, the cards could have a portion which the user writes on to record the type of transaction, and the amount of the transaction. Alternatively, the card could have a portion which the user signs upon receipt and a portion which is later countersigned at the vendor, to provide additional security.

Detailed Description Text (16):

These credit cards could even have a portion which the user signs and provides to a vendor in a store. No vendor would ever, under one embodiment of the system, receive or have access to the user's permanent credit card number. Rather, the vendor (for example, a restaurant in which the user has just eaten) would receive a disposable credit card from the user's supply. The vendor could read the number off the disposable or customized card, could scan the number with a bar code scanner, could read a magnetic strip on the disposable card, or so forth. Upon being used once, the credit card can be marked, if desired, to show both that it has been processed to charge money to the person's account, and to show that it is no longer usable. This disposable card could be returned to the cardholder, saved as a receipt by either of the cardholder or the vendor, be returned to the credit card company, destroyed, or so forth. As noted above, signature could be provided once, or two signature lines could be provided, for the user to sign and countersign.

Detailed Description Text (17):

As yet another example, a user could be provided with a "calculator" of sorts, of credit card like thickness, which stores a predetermined number of disposable numbers therein. After using a number once, the user has to go back to the calculator to get the next number for the next transaction. This calculator could also be provided with a PIN number to prevent a party from accessing the numbers should the user's wallet be stolen or lost.

Detailed Description Text (18):

Alternatively, a card with multiple numbers stored thereon (which become activated in a predetermined sequence) can be provided, so that the actual credit card needs to be available (not just the credit card number) to determine the next available number in the sequence. In this way no single number alone is capable of compromising the user's account for more than one transaction, or of compromising the main number in the user's account. This card could have an LED or some other visually readable means to display the next available card number (either automatically or upon activation of a PIN, if desired). As mentioned above, part of the number could be the fixed, base portion (which is a number or portion common to all of the numbers) and part of the number could be the variable portion (a number or portion which varies). Alphanumeric sequences or any other symbol or series of symbols can be employed for either or both of these portions.

Detailed Description Text (19):

In addition, since they are for use either on a one shot only or on a customized basis, the credit card or number could also be associated with a certain sublimit of the individual's or a corporation's credit limit. Thus, for example, a user with a \$500 limit, for example, could call into the credit card company and obtain a disposable or a customized card which itself only has a \$50 charge limit (for example, when the individual only intends to charge up to \$50 in the next transaction, or to allow someone else to charge up to \$50). This further limits the potential losses from a credit card fraud.

Detailed Description Text (20):

The present invention could also be used to provide a disposable card for a single transaction to users in general (or a customized card for a limited use), including users who do not have a permanent credit card. It could also be provided to users on a debit basis, based in whole or in part upon some reserve or funds provided to the issuing company in advance. Alternatively, the user could even identify the general or specific type and amount of transaction in advance, if desired.

Detailed Description Text (21):

The present invention, and the disposable embodiments in particular, is of additional value for use over the Internet. For example, the following system could be employed. Before a user makes a potential purchase over the Internet, he or she accesses one of his or her disposable credit cards or credit card numbers. As noted above, this could be accomplished by dialing into the credit card company, by removing one of a series of disposable cards from the user's monthly

statement, or so forth. To effect the transaction over the Internet, the user transmits his or her credit card information to the vendor. That vendor then verifies the transaction and obtains an authorization code from the credit card company authorizing the purchase, as is currently standard practice with credit card transactions. To insure the integrity of the system, the vendor is required to verify the code immediately upon receipt. This prevents undue time from elapsing, which is undesirable from a security standpoint. Upon receiving the request for verification, the credit card company notes the identity of the vendor, authorizes the transaction (if the credit card number is valid and the purchaser has sufficient funds available), and forwards the authorization code to the vendor. At the same time, the credit card company also deactivates the credit card number from any further future use. Thus, if a thief intercepts the credit card information en route, when the thief later attempts to take that information and to use it in an illegal transaction, the transaction will be declined since the number has already been deactivated. After the number has legitimately been used once by the lawful owner, it no longer has any continuing validity.

Detailed Description Text (22):

If desired, to remind the user the vendor can transmit a message indicating both that the credit card number has been accepted, and that it is no longer of validity, and can therefore be ripped up. However, if used, this method runs the risk of also alerting a thief who is monitoring the Internet traffic.

Detailed Description Text (23):

The credit card company can also monitor all second requests for use of that credit card number which are transmitted to the system. This monitoring can be used to attempt to catch the thief during his future attempt to illegally use the card

Detailed Description Text (24):

As additional security, each of the disposable credit cards can be given an expiration date, e.g. the end of the month or the end of the billing cycle. Thus, if the credit card is not used within the time limit, it expires. (This expiration date could be printed on disposable paper credit cards). This approach has been used in a different application by credit card companies with respect to checks that are sent with the statement to the user with a given expiration date. As far as the present inventor is aware, that system has been used by credit card companies with satisfactory results in the past.

Detailed Description Text (25):

The card company can also monitor the time of second requests. If the time of second request is extremely close to that of the first request, then the company can block both transactions on the grounds that a thief may be in the process of attempting to quickly intercept and use a credit card number en route before the user.

Detailed Description Text (26):

To further add to the security of the system, a function can be built into Internet software, such as the popular Internet browsers, in which a server assigns a universal time and date stamp (based for example on Greenwich Mean Time) to each credit card transmission transmitted by a user over the Internet. Thus the authorized user's transaction will be assigned a time and date, such that the credit card company can determine, when the same disposable number is sent twice within a short time frame, which transaction corresponds to the one in which the number was sent first. A function could also be provided in which the Internet address of the sender or some other password is encrypted and transmitted as well.

Detailed Description Text (27):

For example, a password which modifies over time and which is coded to the time/date stamp can also be integrated into the browser. The password is individual to each user, with the data summarizing the algorithm used to encode the password being provided to the user and to the individual's credit card company ahead of time (as part of the security information associated with the account). When the transaction is effected, the browser sends information to the internet provider's server, which sends back the universal time/date stamp. The browser then encodes the password and sends it back to the server with the credit card information to be transmitted to the vendor.

Detailed Description Text (28):

The present invention is not limited to use over open systems. Rather, it is intended that it can also be used over secure systems to provide an additional added level of security.

Similarly, the invention can be used for those individuals who own credit cards and wish to purchase items over the telephone, but who are reluctant to give out or release their credit card information over the phone.

Detailed Description Text (29):

Likewise, although a variety of security procedures and methods are disclosed herein, any of the security procedures, protocols, encryption techniques, and so forth, used in the art, can be used in connection with the present disposable and/or customized credit cards.

Detailed Description Text (30):

If the disposable credit cards are stolen or lost, the credit card company can, of course, minimize loss by simply deactivating them upon learning of the theft or loss from the user. In addition, the placement of sublimits on each of the cards, or on the group of cards as a whole, further minimizes potential loss.

Detailed Description Text (31):

Although a disposable credit card number system is preferred, as described above, alternatively, a special, separate (disposable or customized) credit card number could even be assigned specifically for use over the Internet, whose use is subject to higher security measures, whether usable one or more than once. For example, after use, the user would have to call into the credit card company to verify the transaction, or the credit card company would call the user at a predetermined number (e.g. the user's home number) to verify that the user made the transaction. This alternative system could be used for example, exclusively with Internet transactions on secure connections, to provide an additional level of comfort to those users who are uncomfortable with transmission of card information even over secure connections. In the event of problems, this separate Internet credit card number could be deactivated separately from the main credit card number associated with the account.

Detailed Description Text (32):

In accordance with further embodiments of the invention, customized credit cards are also provided herein. These credit cards can be customized by the user such that they are only suitable or usable for particular subuses, for particular subframes of time, or so forth. This differs from the present practice in the art, which is to have credit card numbers which are valid for all uses, and for all periods of time until the card expires.

Detailed Description Text (33):

In the current practice in the art, for example, employees frequently make payments which are later reimbursed by their corporation. In accordance with the present invention, their corporation can issue customized credit cards, or obtain customized credit cards from a credit card company, which can serve certain limited uses, functions or so forth. This card can be customized in any of numerous ways. For example, the customized card could be set to be valid for a certain limited number of dates or until a certain date. For example, if an employee is going on a business trip for two days (or some other amount of time), the card could be set to be valid on only those two days. Thus, the employee is authorized to use the card for charges on only that time that the employee is away on the business trip, but not for any other time. Thus, in accordance with these embodiments, the card can have a user customized range of dates or series of dates. In one embodiment this is a range of dates with a commencement date and expiration date. (This is useful, for example, if an employee is going on a business trip, one or more cards could be issued which are valid for the dates of the trip, with the card not being valid before the trip starts or after the trip ends). In another embodiment the card becomes valid at any specific time (even a time of day) and ceases to be valid at any other specific time. Likewise, the card could become valid for a series of ranges of dates, even dates which are non consecutive or non contiguous. For example, it could be valid for a specific day or series of date in March (for a first business trip), become deactivated once that trip is over, can be reactivated for a specific day or dates in June (for a second business trip), be deactivated once that trip is over, and so forth. It could also be valid for a specific predetermined amount of time. For example, it could be valid for any one week period, beginning from when the user or subuser uses first uses it.

Detailed Description Text (34):

The card can also be customized for only particular uses or groups of uses. In this manner, the main cardholder (e.g. a corporation, a parent, etc.) can determine in advance what the card can or should be used for. For example, the card could be customized so that it is only good for airline reservations, such that if the employee tries to use it for any other type of charge,

the charge will be declined, regardless of the amount of the transaction involved. Or the card could be customized so that it can only be used for airline and hotel charges. The types of uses which can be provided include any type of use that is currently charged or could in the future be charged on a credit card, or any combination of the same. Currently, charges which are placed on cards, include airline, hotel and car rental charges, restaurant bills, retail store purchases, and so forth.

Detailed Description Text (36):

As one example, an employee could be given authorization to purchase a new computer system. A customized credit card could be issued to the user which is only valid for use for that particular type of charge (computer hardware and software stores) and to the credit limit decided by the issuer or authorizing party at the corporation, such that if the employee tries to use it for anything else or for a charge in excess of that authorized, the charge will be declined. The card could even be customized for use in a particular store itself or a particular chain of stores (such as a particular restaurant, or a particular chain of restaurants). Any of the features in the present application can also be combined --thus, the employee could be given a card for use in any computer store which is good for a total purchase of up to, for example, \$2000 in value.

Detailed Description Text (37):

As another example, a parent could give a teenage child a card to go out and make a specific purchase for the child or for the parent. The card could be valid only for purchase on that particular day, to a certain designated purchase limit, and even, if desired only in a certain store, or group of stores or types of stores (e.g. clothing stores), or types of purchases or items. The main account could have, for example, a \$1500 credit card limit, but the parent could set a \$100 limit for use of the customized card on that particular day. Thus, if the card is lost or stolen, the card can not be used at stores other than the types chosen by the parent. Use in any other type of store or on any day other than that one day will cause the card to be declined. This minimizes the amount of credit card loss which can occur, and increases the chances of catching the thief. Likewise, the sublimit of \$100 also minimizes the amount of loss which is possible.

Detailed Description Text (39):

The amount of credit on the card could be as high as the credit on the main account, or alternatively, could also be customized. The main cardholder (e.g. the corporation, the parent, etc.) can set how much credit is on the particular card for the subuser (e.g. the employee). This can be done in some fixed manner, on the basis of some formula, or so forth.

Detailed Description Text (40):

Self transfer of funds and customization by the corporation or the user of the card is preferred. In other words, the corporation determines what uses and/or amounts are set on the credit card up to the corporation's total credit card limit.

Detailed Description Text (41):

In one embodiment, with respect to customization, the user receives one or more credit cards, each of which is inactive. Each card has a blank amount of credit, and no predefined use, i.e. the card initially has no credit available on it at all and no use available to it. When the user receives the credit card, or when the user is ready to activate the card, the user determines how much of his or her available credit he or she wants to transfer onto that particular card and what particular uses or types of uses are desired (or even all uses, if desired). For example, the user may decide that he or she wants to go to a particular place or store that day and have a certain amount of money with himself or herself (or wants to send his or her employee with a certain amount). In addition to or in place of carrying cash, the user could carry a card having a predetermined amount on it, and could even, if desired, set the places or types of places where the card will be active.

Detailed Description Text (44):

As a security feature, in plurality of card embodiments such as the former, it can be preestablished that not more of a certain percentage of the total sum available can be used on a single card, or can be used without verification of identity. For example, a 50% or 20% single use ceiling (or any other number) can be set by the credit card company or the user, to further guard against loss due to fraud. In this embodiment, if a transaction is attempted with any one card which is in excess of the predetermined ceiling for a single card, the card use can be temporarily blocked or subject to verification of identity, to verify that the card was

not stolen and being used illegally for large transactions.

Detailed Description Text (47):

As another formula, there can be also be a total available credit set by the corporation as customized for the year (or for some period of time, or for a particular trip, etc.) for a person, or for an entire department, or so forth, which can either be on one card, or distributed over several cards, as explained above.

Detailed Description Text (48):

Other combinations can be provided as well. For example, the card can be set such that there are certain combinations of customizations available. For example, each subuse can be associated with a specific credit limit for that subuse on that one credit card. Thus, the user may be told that he or she can spend up to \$500 on air travel, \$1000 on hotel rooms, \$300 on car rentals, and those limits can be programmed into or preset to the card. Other combinations of dates of transactions, types of transactions, amounts for individual and/or total transactions, etc. on a single card, or on multiple cards, can be set as well.

Detailed Description Text (50):

Many other embodiments can be implemented as well. A card can be issued to an individual, or to a department. Or, a group of cards can share a single credit limit. A card can be customized such that, when items are purchased by phone or over the Internet, etc., the only shipping address which will be accepted is a preset shipping address already assigned to the card (e.g. by the main cardholder). A card can be set to have a fixed maximum per transaction limit. It can be set to allow, or disallow cash withdrawals. A card can be set to send out a notification to the main cardholder upon each purchase, or upon each purchase meeting certain criteria (e.g. over a certain limit, pertaining to a certain category, or so forth). The notification could be set to include certain required information, e.g. when it was used and/or where it was used and/or how much credit is left or any other information desired. Likewise, a preapproval can be required before every purchase or before certain purchases, such as purchases over a certain limit, or purchases of a certain type.

Detailed Description Text (51):

Likewise, a card can be encoded for multiple uses or types of use. In one such embodiment, the card can be encoded such that it can be used for other magnetic card systems as well. For example, the customized card could be encoded such that it can also be used in place of some other existing card, e.g. as a metrocard (i.e. a fare card on the New York City subway system), as an EZ Pass (i.e. a card which is used to drive through tolls in New York or elsewhere), or so forth. These multiple use cards could either have a preset amount on them (as a debit card of sorts), or they could interface with the other existing card system (whether the Metrocard system, the EZ Pass system, or so forth) such that upon use of the customized card, the funds are taken out of the user's credit card account.

Detailed Description Text (52):

Or, in another variation on this embodiment, multiple brands of cards can be bundled together on a single customized card for ease of use of the user. The term "brand" is used herein to refer to the general card issuing authorities, whether Visa, Mastercard, American Express, Discover, etc. or to more specific issuing authorities, e.g. Citibank Visa, MBNA Mastercard, etc. In this embodiment, Visa and/or Mastercard and/or American Express etc. card accounts can be bundled together on a single credit card. When the user presents this single card to the vendor he or she has the option to decide which of those brands' account(s) on the card he or she wants to use for the transaction. This reduces the number of cards the individual has to carry. A single transaction could even be broken up among a series of cards if desired with the transaction statement indicating for example that \$200 out of the \$600 dollar purchase was charged to the Visa account, and an equal amount to the Mastercard and Amex accounts. Or, the main account holder could set up the card to be capable of some fixed total amount of charges (e.g. \$1000) with the user free to use any of the accounts on the card in any combination desired to charge up to that amount. This is useful if some establishments accept only one or two of these brands, allowing the user (e.g. the employee, the child, etc.) to use the customized card as establishments that accept any of the brands on the card. Or, for purposes which may be beneficial to the main account holder (e.g. for purposes of frequent flyer mile programs, membership dollar programs, etc.) the customized card could be set up such that all of one or more subtypes of use is charged onto one brand, all of another or more subtype onto a second brand etc. For example, the card could be set such that all airline charges are charged onto the Amex Card, all retail store purchases to the Visa, all hotel reservations to the

Mastercard, etc. This could be by the customization of the card which only allow certain types of use of each account, and/or by codes which automatically select the appropriate brand or card account when the user attempts to use the card. This could be in any customization scheme desired. For example, in another embodiment, the first \$x amount could be charged to one card account, the next \$y dollar amount to another card account, or so forth.

Detailed Description Text (53):

In accordance with a preferred embodiment of present invention, a card could be issued to be always "off", unless the main card or account holder, or the authorized person on the card (i.e. the person given the authority to control the uses of the accounts on the card), authorizes or sets or turns the card and/or a specific use of the card "on" for either a particular time period, or for use until certain conditions are met. For example, the card could be issued to an employee or to a child, and normally be in an "off" state (as opposed to general purpose or regular credit cards which are normally in an "on" state) which can not be used, until the main cardholder authorizes that the card be turned on for the next day (and the next day only). Or, the card could be turned on until one transaction is conducted using the card (or some specified multiple number of transactions are conducted using the card), or a specific use is effected of the card, or turned on in accordance with any of the other customizations of the card described herein. In accordance with this embodiment, the card normally remains "off", but is occasionally or periodically turned "on" for a while to allow the card to be used for a desired purpose. After that purpose has been accomplished, the card goes back "off" again. In this manner, the card can be turned on and off by the user as often as desired or necessary.

Detailed Description Text (54):

In another embodiment of the present invention, the user can maintain a list of available credit card numbers in his or her computer and/or software program, with the list further indicating the specific customized use of each number. Alternatively, the user can maintain a list by hand, or a list can be provided each month with the user's statement. If desired, the uses of each number can vary over time. If an unauthorized user intercepts the first credit card number and attempts to use it for a use that it is not enabled for, the transaction will be declined. For example, a user could maintain 5 separate numbers (or any other desired number), each of which is linked to the main card account. Today, one particular number could be authorized for booking airline tickets for the current business day (but no later), while tomorrow a different number could be authorized for that purpose.

Detailed Description Text (55):

Customization (and activation) of the card or a specific credit card number can be in any of the ways known in the art. In a simple method, for example, the user can call the credit card company and, once his or her identity has been verified, can direct the credit card company to customize the card (or a specific credit card or credit card number on the account) in the manner desired and/or to activate that specific credit card or credit card number. In a variation on this method, the user could be required to call from his or her home phone, with the phone number being verified at the credit card company using "Caller ID".

Detailed Description Text (56):

In another embodiment, the user can use a computer to dial in over a direct connection (or over the world wide web or the Internet on a secure connection) to the credit card company, and program in the desired characteristics using the user's computer. In this embodiment, a software program can be provided to customize and/or activate the card and/or the user can access a web site (i.e. at the credit card company) where a form can be filled out by the main cardholder (or by the authorized person on the card or an authorized card user) to set the desired customization parameters. This form could then be accessed as often as desired to update and/or modify the customization of the card or specific credit card numbers, check the status or usage of the card or specific numbers, etc. In addition, as a further embodiment, authorizations done using this program or connection could be compared (either automatically or upon demand by the user) against actual purchases recorded by the credit card company against the card. In this manner a "cross check" is provided, so that if a limited use, customized or disposable card transaction comes into the credit card company which was not authorized by the cardholder, it will show up on the cross check. In a further embodiment, this cross check could be effected automatically (e.g. each time the user logs, in), periodically (e.g. once per day or per some set time period), upon the user's activation of this feature, or upon the user's deliberate initiation of a cross check.

Detailed Description Text (57):

In some embodiments, the main cardholder orders or obtains the card from the credit card company. In other embodiments, the main cardholder issues or activates the credit cards off of his or her main account him or herself, after transmitting the necessary customization information to the card company, and obtaining the necessary authorization.

Detailed Description Text (58):

If desired, a customized credit card could be converted to a regular, general purpose credit card, or vice versa, if desired. This can be used to deal with changing circumstances, needs or desires of the main cardholder, the card user, the corporation, etc. By a "regular" or "general purpose" credit card, the present inventor refers to those credit cards currently used in the art, which have no limitations on their use other than that the card be valid (e.g. be before the expiration date and be of an account in good standing), that the person using the card be the authorized user, and that the transaction be within the available credit left on the card. Subject to those provisions, such cards can be used at any time for any types of purchases at any vendor accepting that type of card.

Detailed Description Text (59):

Should a card or any of the plurality of cards be stolen, a user can with one call deactivate one or all of the cards at the same time. Moreover, since these cards are preferably all linked to the user's main credit card account, and are thus individually on file with the credit card company under that account, the user does not need to worry about safekeeping or storing the list of separate cards or numbers.

Detailed Description Text (60):

As a further security feature, a disposable or customized credit card can be provided with a "fingerprinting area". During use of the card, the user can be asked to place a particular finger on a certain portion of the card to form a fingerprint which can later be used to verify whether the card was used by the rightful owner or used illegally by someone without authorization. Preferably, this area is covered by a flap (e.g. a plastic cover) which is lifted or removed before fingerprinting, to prevent stray marks or fingerprints from appearing on the area before it is ready for use.

Detailed Description Text (61):

With respect to those which are for a single use only, the user can sign (and/or fingerprint) the back of the card, and the vendor could submit or return the cards to the credit card company if desired. Alternatively, the vendor could be required to scan the cards into an appropriate system, with a record of the scan going to the credit card company.

Detailed Description Text (63):

In accordance with another embodiment of the invention, the cards could each have their own PIN number, or PIN numbers.

Detailed Description Text (64):

Upon use of the card, the information regarding the transaction is transmitted to the credit card company, as is known in the art. In a further embodiment of the invention, the information on each purchase from a vendor is transmitted directly to the user after the transaction is completed so that the user can directly monitor and keep records of his or her usage, without waiting for the credit card statement to come in. This information can be sent to the user in any manner desirable. For example, it can be transmitted over the Internet to the user, to the user's web page, or so forth. Instead of the user, it can be transmitted to a third party, if desired; for example, if the card is being used as an expense card for an employee's expense account at a corporation (as described herein), the information can be transmitted directly to the corporation. This transmission can be done by the credit card company itself. Alternatively, if desired, the system can be set up such that the information is transmitted at the point of sale. This can be done with or without the credit card embodiments described above as a permanent or automatic recordkeeping system.

Detailed Description Text (65):

In the preferred embodiment, these credit cards can be used, processed, etc. by a credit card company in the same manner as with its regular credit cards, with the exception that the present cards provide the additional features provided herein.

Detailed Description Text (66):

One of the current problems with a regular card, whether it be a credit card, a debit card, or so forth, is that a thief potentially has full access to all of the credit or funds in your account, until the theft or unusual activity is discovered and/or blocked. In the present invention, as described above, a certain set level of funds or type of use of funds can be segregated aside by the user for a desired period, use, or so forth, while maintaining the integrity of the main account intact (and even potentially maintaining the identity or details of the main account secret).

Detailed Description Text (67):

Although the term credit card is used throughout the present application, the intention is to include credit cards, charge cards, and debit cards by that term, unless otherwise stated. In addition, the present inventions can be used with other cards used for purchases or transfers of funds, as well.

CLAIMS:

1. An item, comprising: a financial card, said financial card having been provided by a credit card company at the request of a first person, said financial card being provided for use by any person determined by such first person; and, wherein said financial card is further customized such that it is limited to use for only a particular type of transaction, said type of transaction being purchases at predetermined vendors of a predetermined identity, such that said customized card will be valid at those predetermined vendors, and will not be valid at the other vendors accepting cards from that credit card company.
2. A method as claimed in claim 1, wherein said credit card is an American Express.RTM. brand credit card.
3. A method as claimed in claim 1, wherein said credit card is a Visa.RTM. brand credit card.
4. A method as claimed in claim 1, wherein said credit card is a Mastercard.RTM. brand credit card.
5. An item as claimed in claim 1, wherein said credit card is a card comprising a magnetic strip.
6. An item as claimed in claim 1, wherein said credit card is not a smart card.
7. An item comprising: a website on the world wide web, said website being the website of a credit card company where requests can be made for a financial card, wherein said financial card is a card requested by a first person and which is provided by the credit card company for use by any person of the first person's choice; and, wherein said credit card is further customized such that it is limited to use for only a particular type of transaction, said type of transaction being purchases at predetermined vendors of a predetermined identity, such that said customized card will be valid at those predetermined vendors, and will not be valid at the other vendors accepting cards from that credit card company.
8. An item as claimed in claim 7, wherein said website comprises a form to be filled out by the first person to request said activation of said credit card.
9. An item as claimed in claim 7, wherein said credit card is a card comprising a magnetic strip.
10. An item as claimed in claim 7, wherein said credit card is not a smart card.
11. A method comprising: requesting a financial card from a credit card company via a website on the world wide web, said requesting of said credit card being by a first person, said financial card being provided by the credit card company for use by any person of the first person's choice; and, wherein said request is for said financial card to be customized to be limited to use for a particular type of transaction, said type of transaction being purchases at predetermined vendors of a predetermined identity, such that said card will be valid at those predetermined vendors and will not be valid at the other vendors accepting cards from that credit card company.
12. An item as claimed in claim 11, wherein said credit card is a card comprising a magnetic

strip.

13. An item as claimed in claim 11, wherein said credit card is not a smart card.

14. A method, comprising: providing a financial card, said financial card being activated by a credit card company, said card being a card requested from the credit card company by a first person, said financial card being provided by the credit card company for use by any second person of the first person's choice, said card being a card provided in response to a request from the first person via a website over the world wide web for said card; and, providing said card as a customized card which can only be used for a particular type of transaction, said type of transaction being purchases at predetermined vendors of a predetermined identity, such that said card will be valid at those predetermined vendors, and will not be valid at the other vendors accepting cards from that credit card company.

15. A method as claimed in claim 14, wherein said credit card is an American Express.RTM. brand credit card.

16. A method as claimed in claim 14, wherein said credit card is a Visa.RTM. brand credit card.

17. A method as claimed in claim 14, wherein said credit card is a Mastercard.RTM. brand credit card.

18. An item as claimed in claim 14, wherein said credit card is a card comprising a magnetic strip.

19. An item as claimed in claim 14, wherein said credit card is not a smart card.

22. An item as claimed in claim 1, wherein said card is provided to the second person based on funds provided to the credit card company in advance.

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Search Results -

Terms	Documents
L16 and (parent-child or parent with child or parent with child or parent adj child)	340

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<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
<u>L17</u>	L16 and (parent-child or parent with child or parent with child or parent adj child)	340	<u>L17</u>
<u>L16</u>	(mutiple or two or plural\$ or several) near2 ("pin" or "personal id" or "personal identifier")	146499	<u>L16</u>
<u>L15</u>	"multi-tiered pin"	0	<u>L15</u>
<u>L14</u>	("multi-tiered pin" or "multi-tiered personal identifier" or "multi-tiered personal id")	0	<u>L14</u>
<u>L13</u>	L3 and ("multi-tiered pin" or "multi-tiered personal identifier" or "multi-tiered personal id")	0	<u>L13</u>
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<u>L12</u>	(5500513 4837422)! [PN]	2	<u>L12</u>
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<u>L9</u>	'5500513'.pn.	1	<u>L9</u>
<u>L8</u>	'4727243'.pn.	1	<u>L8</u>
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L6 '5500513'.pn.

1 L6

L5 '5500513'.pn.

1 L5

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L4 L3 and ("pin" or "personal identifier" or "personal id")

193 L4

L3 L2 and (credit with limit or credit near limit or credit adj limit)

346 L3

L2 L1 and (credit with card or credit near card or credit adj card)

1599 L2

L1 (parent-child or parent with child or parent near child or parent adj child)

23405 L1

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L1 and L20	2

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	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<u>L21</u>	11 and 120	2	<u>L21</u>
<u>L20</u>	116 and credit near2 limit	47	<u>L20</u>
<u>L19</u>	117 and credit near2 limit	2	<u>L19</u>
<u>L18</u>	117 and (credit with limit or credit near limit or credit adj limit)	2	<u>L18</u>
<u>L17</u>	L16 and (parent-child or parent with child or parent with child or parent adj child)	340	<u>L17</u>
<u>L16</u>	(multiple or two or plural\$ or several) near2 ("pin" or "personal id" or "personal identifier")	146499	<u>L16</u>
<u>L15</u>	"multi-tiered pin"	0	<u>L15</u>
<u>L14</u>	("multi-tiered pin" or "multi-tiered personal identifier" or "multi-tiered personal id")	0	<u>L14</u>
<u>L13</u>	L3 and ("multi-tiered pin" or "multi-tiered personal identifier" or "multi-tiered personal id")	0	<u>L13</u>
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<u>L10</u>	'4812628'.pn.	1	<u>L10</u>
<u>L9</u>	'5500513'.pn.	1	<u>L9</u>
<u>L8</u>	'4727243'.pn.	1	<u>L8</u>
<u>L7</u>	'4727243'.pn.	1	<u>L7</u>
<u>L6</u>	'5500513'.pn.	1	<u>L6</u>
<u>L5</u>	'5500513'.pn.	1	<u>L5</u>

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

<u>L4</u>	L3 and ("pin" or "personal identifier" or "personal id")	193	<u>L4</u>
<u>L3</u>	L2 and (credit with limit or credit near limit or credit adj limit)	346	<u>L3</u>
<u>L2</u>	L1 and (credit with card or credit near card or credit adj card)	1599	<u>L2</u>
<u>L1</u>	(parent-child or parent with child or parent near child or parent adj child)	23405	<u>L1</u>

END OF SEARCH HISTORY